Instruction Manual

R-G-B

impression

from software version 1.72/30
(Instruction version 1.26)

GLP
GERMAN LIGHT
PRODUCTS
since 1994

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Notes:

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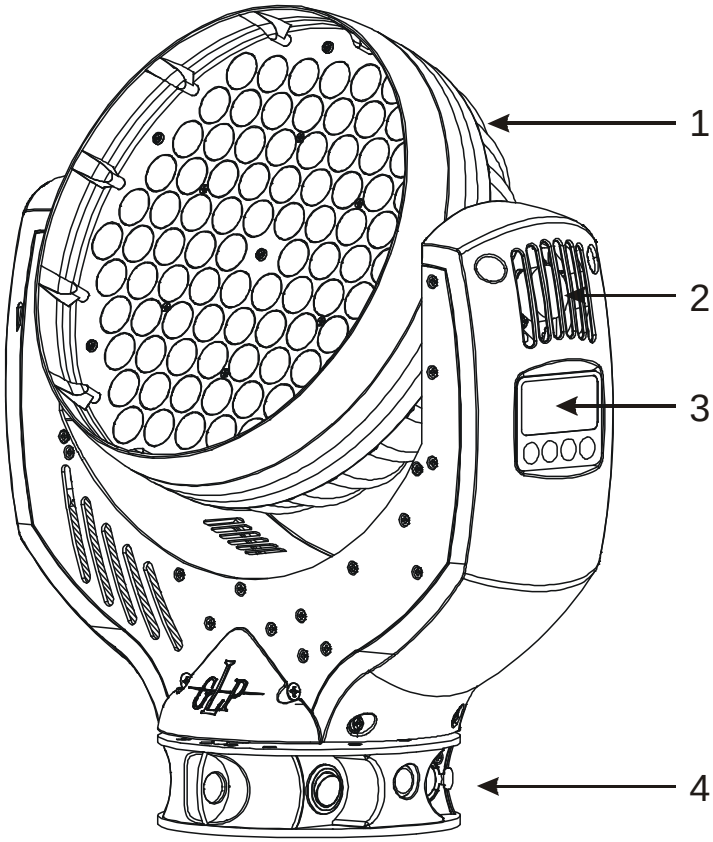
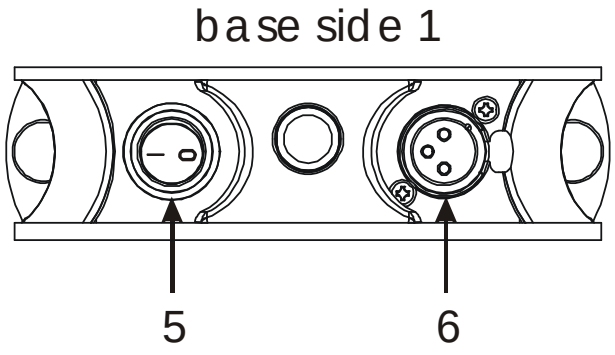
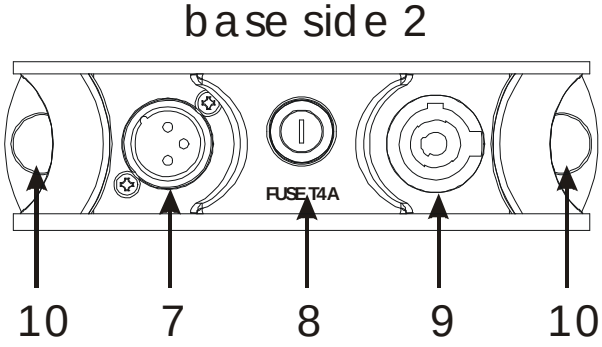
1 Description of Device

1. Moving head (actively and passively cooled)
2. Arm with various cooling vents
3. LCD-Display/Menu (data entry)
4. Base with various connectors and Camlock mounting system







5. Power On/Off
6. DMX- Output (3 pole)
7. DMX- Input (3 pole)
8. Micro-fuse 5x20mm, T4A
9. Mains supply (Powercon)
10. 2x Safety eyes

1.1 Safety Instructions

The **IMPRESSION** is an advanced technology product. To guarantee smooth operation, it is necessary to follow the following instructions.

The manufacturer of this device will not take responsibility of damages through any disregard of the information in this user manual. Warranty claims will also be cancelled in the event of the system casing being opened.

1. Make sure that before powering up the fixture, the fans and air inlets are clean and not blocked by anything.
2. Before powering up the fixture, ensure that the moving head part of the fixture can rotate unhindered through its full range of movement.
3. A safety distance of at least 0.5 m to any easily flammable material (e.g. decoration material) must be adhered to.
4. **Attention!** Don't touch the device during operation. Parts of the fixture can become hot and can cause injuries and / or damages.
5. The system doesn't contain any user serviceable parts. Opening the fixture will void the manufacturers warranty.
6. Danger of burning. Wait at least 15 minutes after disconnecting the AC power before changing the optical carrier on the fixture. Pay attention to possible hot parts of the system.
7. **Never look directly into the beam of light or one of the LEDs.** Never use optical apertures with a distance less than 0.5 m to observe the beam of light. **LED Class 2M.** Not following these precautions can result in serious injury to your eyes and in particular, your retina.

Attention: LED Class 2M can cause injuries of your eyes even without optical instruments in front of them or within a distance of less than 0.5m and short exposure time.

Avoid direct radiation to your eyes!

8. To ensure proper operation, you must also follow the installation guide described in chapter 2 of this manual. Operating the **IMPRESSION** without suitable mounting devices can increase the risk of an accident.
9. The **IMPRESSION** features a unique small and lightweight design with no specific carrying handles. Care needs to be shown when handling the fixture to ensure that no unnecessary damage should occur. Fragile areas include the LCD display and cover on one side arm and the front bezel.

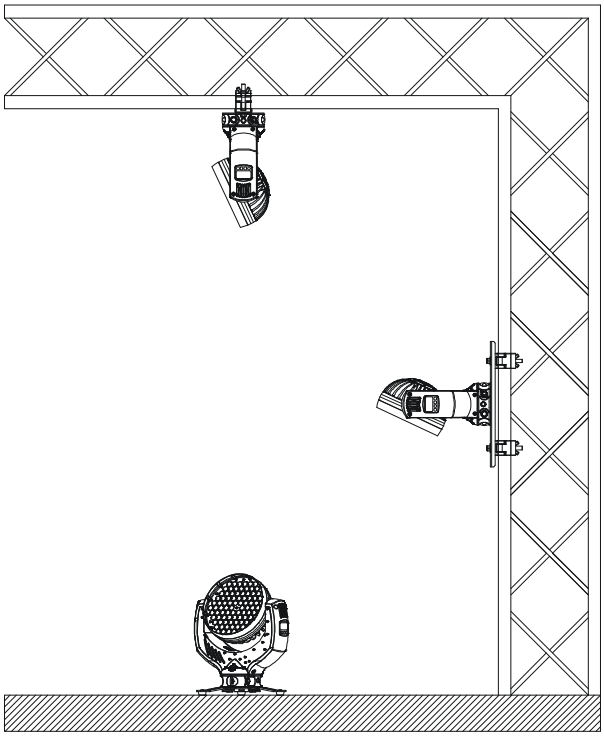
Pressure in these areas could result in damages which will not be covered by the standard warranty.

10. Repair-, maintenance- and installation work should only be performed by qualified or GLP certified staff. You need to pay attention to the common rules of technology that are not explicit mentioned in this manual.
11. Use only original spare parts. Any structural modification on the system will terminate all warranty claims.
12. Please keep this instruction manual for future reference.

2 Preparation and Installation

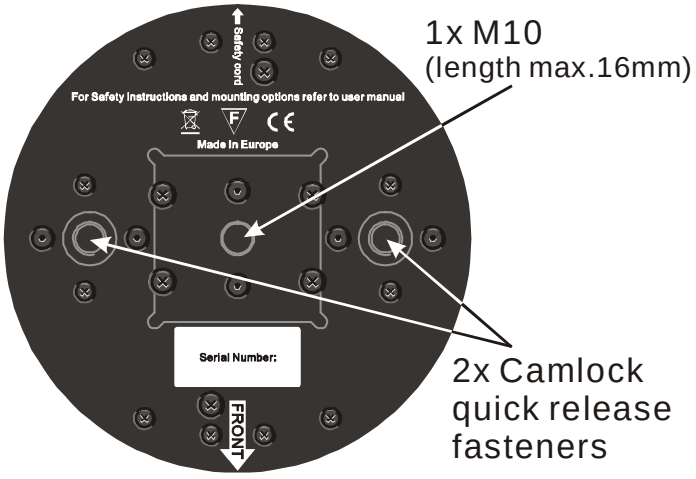
2.1 Mounting

The **IMPRESSION** is fully operational whether it hangs or is mounted to a wall. It can also be operated while standing on the floor. Keep a safety distance of 0.5 m from any easily inflammable materials (decoration etc.).



Pay attention to the regulations of: BGV C1 (former VBG 70) and DIN VDE 0711-217.
The installation shall be done by qualified personal only.

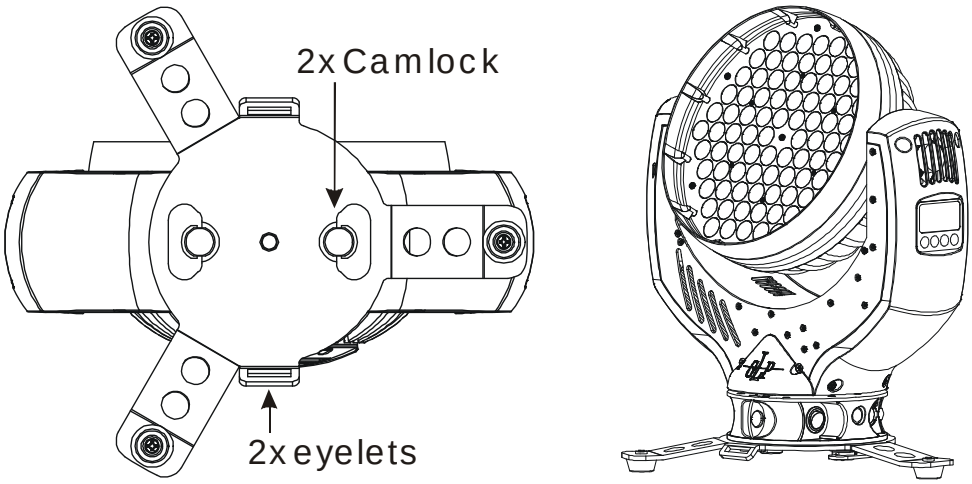
For the various mounting positions of the **IMPRESSION** (standing on the floor, sideways or hanging) different accessories kits are available. Using any required kits, along with the standard mounting connectors on the base of the fixture, will ensure a safe and firm installation.



front side of the fixture

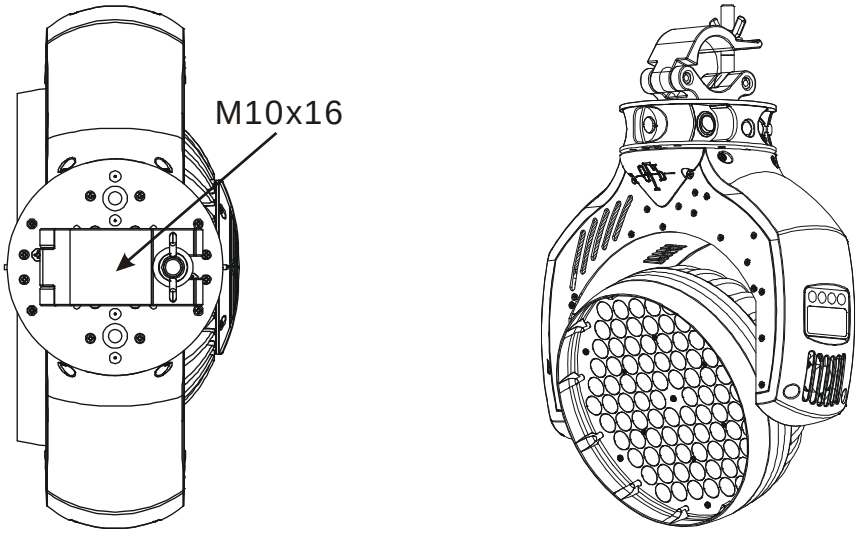
2.1.1 Mounting on the floor (upright)

To operate the **IMPRESSION** in an upright position, please use the dedicated floor-stand which ships with all original fixtures. The floor stand is mounted to the base of the fixture using the two Camlock quarter turn fasteners. Line up and engage the camlock connectors from the floor stand into the base of the fixture and turn the two fasteners 90° to lock them. Do the opposite to release them again. On both sides you'll find eyelets to pull though a fixing strap. This allows additional bracing of the floor-stand during the upright operation.



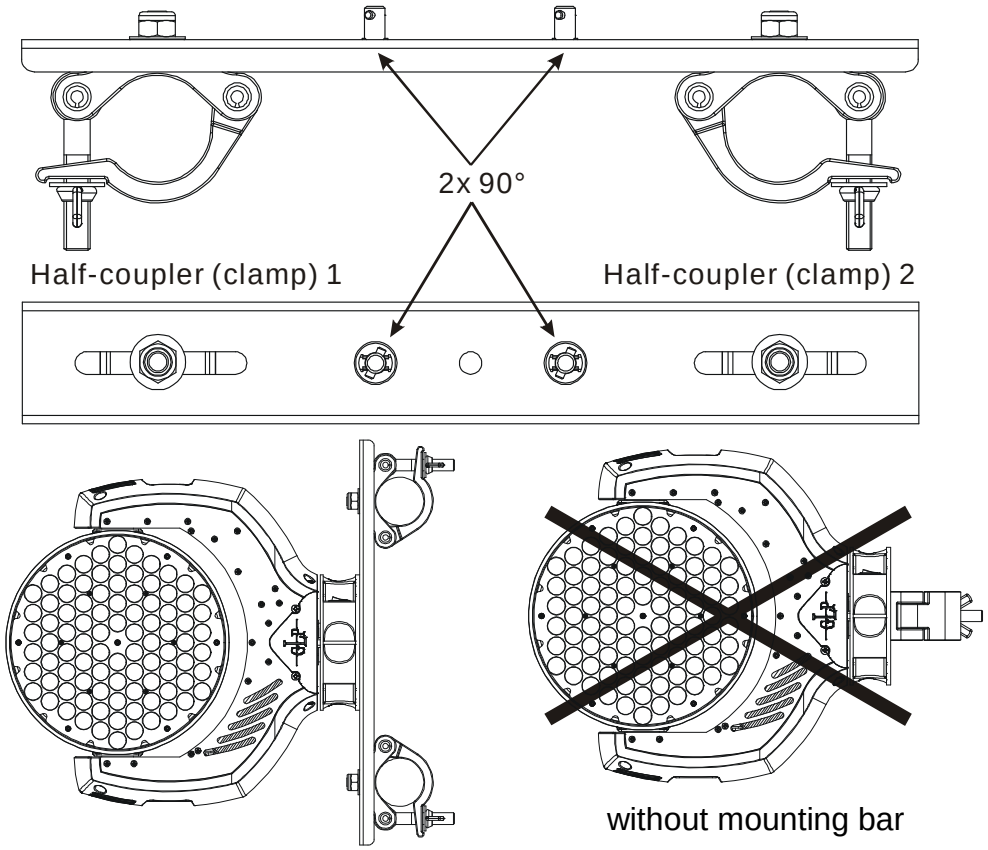
2.1.1 Mounting in hanging position (head down)

To operate the **IMPRESSION** in a hanging position, a half-coupler or similar clamp can be mounted directly to the bottom of the base using the M10x16 mm threaded socket.



2.1.1 Mounting in a sideway position

To operate the **IMPRESSION** in a sideways position, please use an additional mounting bar, available from GLP or one of their agents.. This mounting bar is fixed via the two camlock quick-release connectors. Two half-couplers or clamps are then used to hang the mounting bar. This technique is necessary to cope with the additional torque in this mounting position. Never use the "Mounting in hanging position" technique described above to secure the fixture in a sideway position, as the fixtures base can become damaged, and a secure installation cannot be assured.



2.2 Securing the Device

Regardless of the mounting method of the **IMPRESSION** you'll have to use a secondary safety wire. This safety wire can be attached to the fixture by threading it through one of the two holes provided on the base of the fixture. Ensure that the safety wire is securely fastened through the fixture and the fixtures mounting support. Install a safety wire that can hold at least 10 times the weight of the fixture.

2.3 Connections

2.3.1 Power Supply

~100-240 Volt AC, 50-60 Hz, earth contact type plug via Powercon

Connected load 350 VA (W) <=> 4 AT (micro-fuse 5x20mm)

Please see printing on the case for the right electronic supply!

Disconnect from the mains supply for changing the fuse and use only the above described micro-fuse type.

2.3.2 DMX

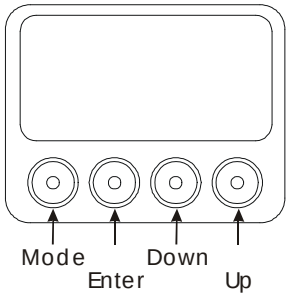
USITT DMX-512 Standard input/output in 3 pole connectors.

3 pole: Pin 1 = [Ground] / Pin 2 = [-] / Pin 3 = [+]

The DMX- Addressing starts at the DMX- Address [001].

3 The Menu Field

You'll find the control board on the side of the arm. It allows you to make all necessary adjustments of the **IMPRESSION.** With the **Mode-**key you get into the main menu. Afterwards you can navigate through the menu with the **Up/Down-**keys. Push the **Enter-**key to get to the next menu level or to confirm your settings. Select **ON/ OFF** function settings with the **Up/Down-**keys. Confirm and save with the **Enter-**key (the display shows **OK**). Push the **Mode-**key to cancel the entry and go back to the main menu.



← MODE - ENTER →

← DOWN - UP →

Level1	Level 2	Level 3	Level 4	Remark
DMX Start Address 001				Define the DMX start address
Special	**Manual DMX**			Manual control of all system functions
		Pan		Manual control for Pan (X-movement)
		Speed Movements		Speed adjustment for Pan/Tilt movements → see also item below
		Pan/Tilt Movements		Manual control for Pan/Tilt movement
		Special		Activate the White- or Full-Power Mode; see also DMX table
		White Temperature		Manual control for color temperature
		Dimmer		Manual control for dimmer
		Shutter		Manual control for shutter
		Blue		Manual control for blue
		Green		Manual control for green
		Red		Manual control for red
		Color Wheel		Manual control for the color wheel mimic
		Tilt		Manual control for Tilt (Y-movement)
	Display Contrast			Adjustment for the Display contrast
	Default Set			Resetting all functions to original values
	Set Dimmer Frequency			Changes PMW frequency between 600Hz and 1200Hz
	LED Dimmer Version			Reads out the current LED dimmer (software) version

Impression Version			Reads out the current CPU software version
Adjust	**Key code xxxx**		Use the code for entering the calibration menu (for authorized persons only)
	Pan Offset		Calibration for Pan-Offset
	Tilt Offset		Calibration for Tilt-Offset
	Clear EEPROM		Erase EEPROM memory
	Diagnose		Diagnose functions
		Pos Feed Pan Delta	Internal data and function diagnose
		Anz Ti0-Int-Err	Internal data and function diagnose
		PFC Voltage	Show the present PFC voltage
		Pos Feed Tilt Delta	Internal data and function diagnose
Temperature Arm			Indicates the arm temperature
Temperature Head			Indicates the head temperature
PAN/TILT Motor Power			Switches power for Pan/Tilt ON or OFF (disconnected from power)
PAN/TILT Silent Mode			Reduces maximum speed for Pan/Tilt
DMX Hold			Defines whether the last DMX signal is stored or the lamp is switched OFF in case of signal interruption
Position Feedback			Automatically position feedback (correction) for Pan/Tilt movement
White Adjust			Adjustments for a uniform white color (white balance); only in white-mode
	Red		Input for red adjustments
	Blue		Input for blue adjustments
	Green		Input for green adjustments
Set DMX Image			Stores the Scene currently sent to the unit
DMX input Monitor			Indicates the presently received DMX signal per DMX channel
	Pan		Instantaneous value for Pan
	Speed Movements		Speed adjustment for Pan/Tilt movements → see item below
	Pan/Tilt Movements		Instantaneous value for Pan/Tilt movements
	Special		Instantaneous value for Special
	White Temperature		Adjustment of the color temperature for WHITE
	Dimmer		Instantaneous value for Dimmer
	Shutter		Instantaneous value for Shutter
	Blue		Instantaneous value for Blue
	Green		Instantaneous value for Green

← DOWN - UP →

Red		Instantaneous value for Red
Color Wheel		Instantaneous value for Color Mixing unit
Tilt		Instantaneous value for Tilt movement
Self test		Performs an automatic self-test
Live time		Indicates the overall operation time of the system
Display		Adjust the display
	Blackout	ON/OFF: Display OFF
Select DMX Mode		Please select the desired DMX Mode
	Compressed	Fixture works in "Compressed" mode → see also sectiion 4
	Normal	Fixture works in "Normal" mode → see also section 4
	High-Resolution	Fixture works in "High Resolution" mode → see also section 4
White Mode		Selects the activation of Adjustments for white-balance, on or off.
Reverse Pan		Selects Inverse Pan, on or off
Reverse Tilt		SelectsInverse Tilt on or off
Reset		RESET and new calibration for all functions

← DOWN - UP →

4 DMX Channel Selection (DMX Protocol)

Normal-Mode 14 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	2 - 4 s	0..255	00..FF	0..100
2) PAN-fine	High- Pos ... High- Pos + 2,6°(16 Bit)		0..255	00. .FF	0..100
3) Tilt-coarse	0 .. 300°	1 - 2 s	0..255	00..FF	0..100
4) Tilt-fine	High- Pos … High- Pos + 1,2°(16 Bit)		0..255	00..F F	0..100
5) Color (fixed)	Colors adjustable via RGB		0..7	00..07	0..2,5
	Color 01 - Red [1)]		8..15	08..0F	3..5,5
	Color 02 - Amber [1)]		16..23	10..17	6..8,5
	Color 03 - Warm Yellow [1)]		24..31	18..1F	9..12,5
	Color 04 - Yellow [1)]		32..39	20..27	13..15,5
	Color 05 - Green [1)]		40..47	28..2F	16..18,5
	Color 06 - Turquoise [1)]		48..55	30..37	19..21,5
	Color 07 - Cyan [1)]		56..63	38..3F	22..24,5
	Color 08 - Blue [1)]		64..71	40..47	25..27,5
	Color 09 - Lavender [1)]		72..79	48..4F	28..30,5
	Color 10 - Mauve [1)]		80..87	50..57	31..34,5
	Color 11 - Magenta [1)]		88..95	58..5F	35..37,5
	Color 12 - Pink [1)]		96..103	60..67	38..40,5
	White - CTO	Color temperature 3200K	104..111	68..6F	41..43,5
	White	Color temperature 5600K	112..119	70..77	44..46,5
	White - CTB	Color temperature 7200K	120..127	78..7F	47..49,5
	Rainbow Effect Stop [2)]		128	80	50
	Rainbow Effect [3)]	slow - fast	129..223	81..DF	51..88
	Rainbow Effect, random colors	slow - fast	224.255	E=..FF	89..100
6) Red	Color mixing system - Red	0 - 100%	0..255	00..FF	0..100
7) Green	Color mixing system - Green	0 - 100%	0..255	00..FF	0..100
8) Blue	Color mixing system - Blue	0 - 100%	0..255	00..FF	0..100
9) Shutter	Shutter closed		0..15	00..0F	0..5,5
	Random Pulse effect	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s to 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240..255	F0..FF	95..100
10) Dimmer	Dimmer	0% - 100%	0..255	0..FF	0..100
11) Color temperature	No color temperature correction		0..6	0..06	0..2
	Continuous color temperature correction between 3200k - 7200k	Applicable only for White color [5)]	7..255	07..FF	3..100
12) Special	Max. Power-Mode [4)]	Max. light output without white balance	0..15	0..0F	0..5,5
	White-Mode [4)]	White balance used	16..31	10..1F	6..12,5
	Fan min. as long as temp. < 90℃		224..229	E0..E5	88..89,5

Channel	Function			Time and Value	DMX	HEX	%
	RESET (Normal Mode)				**250..255**	**FA..FF**	**98..100**
13) Move-ment	**No movement**				0	00	0
	Movement	**Size**	**Phase**				
	PAN	1	0°		01..01	01..01	0,5
		1	90°		02..03	02..03	1,0
		1	180°		04..05	04..05	1,7
		1	270°		06..07	06..07	2,5
	PAN	2	0°		08..09	08..09	3,3
		2	90°		10..11	0A..0B	4,1
		2	180°		12..13	0C..0D	4,9
		2	270°		14..15	0E..0F	5,7
	PAN	3	0°		16..17	11..11	6,5
		3	90°		18..19	12..13	7,3
		3	180°		20..21	14..15	8,0
		3	270°		22..23	16..17	8,8
	PAN	4	0°		24..25	18..19	9,6
		4	90°		26..27	1A..1B	10,4
		4	180°		28..29	1C..1D	11,2
		4	270°		30..31	1E..1F	12
	TILT		size / phase see also PAN		32..63	20..3F	13..25
	PAN / TILT		size / phase see also PAN		64..95	40..5F	26..37
	PAN / TILT (inverse)		size / phase see also PAN		96..127	60..7F	38..50
	Circle		size / phase see also PAN		128..159	80..9F	51..62
	Circle (inverse)		size / phase see also PAN		160..191	A0..BF	63..75
	Lying eight		size / phase see also PAN		192..223	C0..DF	76..87
	Random movement		size see also PAN		224..255	E0..FF	88..100
14) Speed Pan/Tilt	Pan/Tilt relative movement				0..1	00..01	0..0,5
	Pan/Tilt slow – fast Use this channel 14) also for the speed of the movements (channel 13).			Pan Min. 660°= 200s Pan Max. 660°= 2 - 4s Tilt Min. 300°= 110s Tilt Max. 300°= 1 - 2s	2..255	02..FF	1..100

[4] Max. Power-Mode vs. White-Mode

The **IMPRESSION** can regard the white-balance adjustments for each individual color setting. Whether the White-Mode is used with RGB can be selected in the **Normal DMX-Mode** during operation with the Special DMX channel. If the Special channel is set to a value between DMX 0..15, the White-Mode is not used and the RGB goes for the maximum light output. If the Special channel is set to a value between DMX 16..31, the white balance is used for the RGB output.

Since there is no Special DMX channel in the **Compress DMX-Mode**, the possibility exists to likewise select these settings also in the display menu. Is the White-Mode set to “ON”, the white-balance is activated. If the White-Mode is set to “OFF”, the RGB goes for the maximum light output (Max. Power-Mode).

[5] The continuous color temperature correction is applicable only for the White color i.e. if this function is selected (DMX ≥ 001) the **Impression** will change the color to white immediately and will then be adjustable in the color temperature in a range between 3200K and 7200K. Hence a color correction for others than white is not intended.

Compress-Mode 10 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	2 - 4 s	0..255	00..FF	0..100
2) PAN-fine	High- Pos ... High- Pos + 2,6°(16 Bit)		0..255	00. .FF	0..100
3) Tilt-coarse	0 .. 300°	1 - 2 s	0..255	00..FF	0..100
4) Tilt-fine	High- Pos … High- Pos + 1,2°(16 Bit)		0..255	00..F F	0..100
5) Color (fixed)	Colors adjustable via RGB		0..7	00..07	0..2,5
	Color 01 - Red [1)]		8..15	08..0F	3..5,5
	Color 02 - Amber [1)]		16..23	10..17	6..8,5
	Color 03 - Warm Yellow [1)]		24..31	18..1F	9..12,5
	Color 04 - Yellow [1)]		32..39	20..27	13..15,5
	Color 05 - Green [1)]		40..47	28..2F	16..18,5
	Color 06 - Turquoise [1)]		48..55	30..37	19..21,5
	Color 07 - Cyan [1)]		56..63	38..3F	22..24,5
	Color 08 - Blue [1)]		64..71	40..47	25..27,5
	Color 09 - Lavender [1)]		72..79	48..4F	28..30,5
	Color 10 - Mauve [1)]		80..87	50..57	31..34,5
	Color 11 - Magenta [1)]		88..95	58..5F	35..37,5
	Color 12 - Pink [1)]		96..103	60..67	38..40,5
	White - CTO	Color temperature 3200K	104..111	68..6F	41..43,5
	White	Color temperature 5600K	112..119	70..77	44..46,5
	White - CTB	Color temperature 7200K	120..127	78..7F	47..49,5
	Rainbow Effect Stop [2)]		128	80	50
	Rainbow Effect [3)]	slow - fast	129..223	81..DF	51..88
	Rainbow Effect, random colors	slow - fast	224.255	E0..FF	89..100
6) Red	Color mixing system - Red	0 - 100%	0..255	00..FF	0..100
7) Green	Color mixing system - Green	0 - 100%	0..255	00..FF	0..100
8) Blue	Color mixing system - Blue	0 - 100%	0..255	00..FF	0..100
9) Shutter	Shutter closed		0..15	00..0F	0..5,5
	Random Pulse effect	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31,5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s to 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240...249	F0..F9	95..97,5
	RESET	**Min. 3 Sec.**	**250**	**FA**	**98**
	Shutter open		251..255	FB..FF	99..100
10) Dimmer	Dimmer (0% - 100%)		0..255	0..FF	0..100

High Resolution (Extended) -Mode 13 DMX Channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	2 - 4 s	0..255	00..FF	0..100
2) PAN-fine	High- Pos ... High- Pos + 2,6°(16 Bit)		0..255	00. .FF	0..100
3) Tilt-coarse	0 .. 300°	1 - 2 s	0..255	00..FF	0..100
4) Tilt-fine	High- Pos … High- Pos + 1,2°(16 Bit)		0..255	00..F F	0..100
5) Red-coarse	Color mixing system – Red	0 - 100%	0..255	00..FF	0..100
6) Red-fine	Color mixing system – Red-Low		0..255	00..FF	0..100
7) Green-coarse	Color mixing system – Green	0 - 100%	0..255	00..FF	0..100
8) Green-fine	Color mixing system – Green-Low		0..255	00..FF	0..100
9) Blue-coarse	Color mixing system – Blue	0 - 100%	0..255	00..FF	0..100
10) Blue-fine	Color mixing system – Blue-Low		0..255	00..FF	0..100
11) Shutter	Shutter closed		0..15	00..0F	0..5,5
	Random Pulse effect	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31,5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s to 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240...249	F0..F9	95..97,5
	RESET	**Min. 3 Sec.**	**250**	**FA**	**98**
	Shutter open		251..255	FB..FF	99..100
12) Dimmer-coarse	Dimmer	0% - 100%	0..255	0..FF	0..100
13) Dimmer-fine	Dimmer - Low		0..255	0..FF	0..100

[1)] The predefined colors can be used as start colors for the Rainbow effect. First select a desired start color, then activate the rainbow effect. All **IMPRESSIONS** will then begin from that color and execute the rainbow effect synchronously. Different **IMPRESSIONS** can have different start colors but will still execute the rainbow effect synchronously. If you choose a color different from the ones marked with [1)] in the tables above the rainbow start-color will be red.

[2)] Rainbow-effect Stop will pause this function. After resuming the rainbow-effect will be continued with the current color.

[3)] The Rainbow-effect will run synchronously only if it is started from one of the predefined colors (see also [1)] before).

Locking and unlocking the Control Panel

You can lock and unlock the control panel by pressing the menu keys **MODE & ENTER & UP** at the same time.

Additional shortcut features when switching on the fixture

a) 1200Hz Mode (Hold down the **UP- button** during power ON)
After switching on, the fixture the LEDs will be operated with a Pulse Width Modulation (PWM) of 1200Hz.
In addition, all standard settings will be loaded (DMX start address [001], Normal Mode).

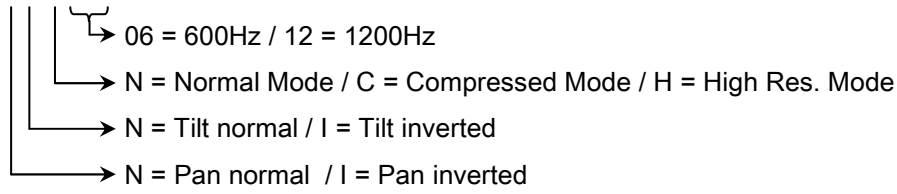
b) 600Hz Mode (Hold down the **DOWN- button** during power ON)
After switching on, the fixture the LEDs will be operated with a Pulse Width Modulation (PWM) of 600Hz.
In addition, all standard settings will be loaded (DMX start address [001], Normal Mode).

c) Standard Mode (Hold down the **ENTER- button** during power ON)
After switching on the fixture, the DMX start address will be set to [001]. All other settings will remain unchanged.

Additional Display Indications

As a default you'll find the following additional information in the first row of the LCD display:

XX/X/XX



5 Maintaining and Cleaning the IMPRESSION

The **IMPRESSION** is a low maintenance fixture. It is only necessary to clean the air inlets and outlets as well as the optical LED lenses from time to time. For safe operation it is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on, or within, the fixture. If they do, the fixture's light output will be significantly reduced, and damages to the fixture may occur. Regular cleaning will not only ensure the maximum light output, but will also allow the fixture to operate reliably throughout its entire life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended. Under no circumstances should alcohol or solvents be used to clean the fixture or its lenses!

5.1 Safety regulations

- **Disconnect the fixture from the mains power before commencing any maintenance work!**
- Wait minimum 15 minutes after removing the power to allow the fixture to cool down.

5.2 Maintenance Intervals (rule-of-thumb)

The maintenance schedule of any given fixture depends on the installation environment. Hence no specific guidelines can be given. The cleaning intervals given below are suggestions, based on practical experience. We suggest that you start with these and develop your own maintenance schedule as you see the fixtures performance in your specific environment.

Maintenance Task	Interval	How
Cleaning of LED lenses and optical system	weekly	soft brush /lint-free cloth
Cleaning of fans and air channels	monthly	vacuum cleaner, airbrush, etc.

Attention:

- **Never let optical parts come into contact with oil or fat.**
- **Before running the fixture wait until all parts are touch dry.**
- **Never touch lenses with bare fingers.**

6 Technical Specifications

Power supply	
Power consumption	350 VA (Watt)
Power Input	~100-240 V AC, 50-60 Hz (auto sensing input)
Fuse protection	Micro-fuse 5x20 mm, T 4A
Operational Parameters	
Max. Ambient Temperature	45℃ / 113℉ (integrated overheating switch)
Mounting Position	Any (see chapter mounting)
Lighting System - Additive Color mixing	
LED Type	90x Luxeon K2 High-power- LEDs
Lifetime	50.000 h
30 LEDs per color, wavelength optimized for maximum presentable color space	
Optical System	
High efficient Collimator cluster	
Exchangeable optical carrier with 10° light distrib ution angle (25° optional)	
Scattering light aperture	
Shutter / Dimmer (8 Bit)	
Strobe- Effect with variable speed between 1 - 10 flashes per second, Random-Strobe, Pulse-Effects	
Continuous Dimmer 0 - 100%	
DMX Control	
Standard USITT DMX-512, 3 pole XLR; [+] = Pin 3 [-] = Pin 2 [Ground] = Pin 1. Die DMX- Addressing starts at the DMX channel [001].	
Pan / Tilt (8/16 Bit)	
Pan- movement	**660° in min. 2 - 4 seconds (Position Feedback)**
Tilt- movement	**300° in min. 1 - 2 seconds (Position Feedback)**
Weights and Measures	
Width of the base	**340 mm / 13.4 inches**
Length of the base	**145 mm / 5.7 inches**
height (head vertical)	**370 mm / 14.6 inches**
Weight (net)	**8.0 kg / 17.6 lbs.**

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